Accident / Incident Report Closed

Unit/Department	Process Area	Site	Report Number
South Operation-Elyria		ELYRIA	0084-SOPS-14-0035
Report Date	Incident Date	Incident Time	Copied From
03/09/2014	03/08/2014	11:15 PM	
Incident Location		Team Leader / Supervisor	Reported By
Building 31 Gen Cat (#3 Calciner)		Robert Scoggins	Robert Scoggins
Title of Event (Limit to 90 characters)		Category	Division / Bus. Group / Subgroup Code
CTO Failure / NOx Release		☐ Safety & Health ☐ Environmental	CC / G-CCP

Incident Classification

☐ Near Miss	☐ Property Loss	☐ Contractor
☐ Process Safety	☐ Citation / NOV	☐ Contractor Injury / Illness
☐ Injury / Illness	☐ Health Exposure	☐ Contract Injury / Illness
☒ Spill / Release	☐ Inspection	☐ PSM
☐ Permit / Regulatory Deviation	☐ Major Incident	☐ Plant Upset
☐ Fire	☐ Non-Occupational	☐ EHS Management System Failure
☐ Odor Complaint	☐ RMP	☐ Other

Describe Event / What Happened

On Saturday March 8, 2014 at approximately 11:15 pm, several shift personnel detected a NOx odor on the 2nd floor of building 31 near the National Dryer. Shift personnel checked the 1st and 2nd floors with NOx meters, and discovered that the release originated from #3 calciner. It was quickly noticed that there was little to no suction registering on the calciner exhaust magnahelic gauges. It was then presumed that the CTO experienced a malfunction (calciner exhaust was not being pulled to the CTO unit).

Immediate Corrective Action or Response

Due to an engineering interlock between the syntron feeder and the Calciner, the feed automatically shut off, calciner exhaust was diverted to the F1 scrubber, and the building was evacuated. After confirming all personnel accounted for, the ERT team gathered and prepared for SCBA entry to further investigate #3 calciner, and to evaluate NOx levels throughout the building. Entry team confirmed NOx levels returned to zero on all floors of building 31, and "all clear" given to personnel.

Immediate Cause

Upon returning to the building, Wonderware was reviewed. It was discovered that at 11:06 pm due to equipment interlocks between the CTO and the syntron the calciner feed was automatically stopped as the malfunction occurred.

Spill Release Type(s)	Non RQ Spill / Release

Chemical(s) Involved	CAS #	Phy. State	Air	Land	Water	Contmt	Units
Nitrogen Dioxide (NOx)	10102-44-0	Gas	1.66	0	0	0	lbs

Disposition of Material	Release to air			
Weather Conditions	Skies:	Temperature:	Wind Direction:	Wind Speed:

Cause Narrative

Electrical short on the VFD caused the CTO to shut down.

Contributing Causes	Root/Primary Causes		
Loose wiring on the VFD on the blower caused an electrical shortage which led to the CTO failure.	28 - Equipment Reliability Program Implementation LTA	29 - Corrective Maintenance LTA	31 - Repair Implemtation LTA
Operations was unsure of the mechanics of what occurs during scrubber failure.	192 - Communications	194 - No Communication or	197 - Communication Between Shifts and Management LTA

		Not Timely	
During the CCR update, the link between CTO and F1 scrubber was severed. The link would have automatically caused the suction to route to F1 when the CTO failed.	15 - Design Input/Output	17 - Design Output LTA	17 - Design Output LTA
VFD was installed 2 - 3 years prior. It is assumed that the connections either became loose over time or were loose from installation. There were no maintenance checks on the VFD during this time.	28 - Equipment Reliability Program Implementation LTA	36 - Predictive Maintenance LTA	38 - Montoring LTA

Explanation of Root Causes

192/194/197 - Newly implemented change caused the syntron to automatically shut off when CTO failed. Operations was not aware of this change.

Any known or potential off-site impacts?	No	PSM Incident?	No	Estimated Cost:	2,000.00 USD
Investigation Team	William D Deisenroth; Jefferson Lewis; Robert Scoggins; Jennifer Bailey				

Item	Corrective Action(s) to prevent recurrence	Responsible Person	Target Date	Final Closed Date	VC Req	VE Req
1	Investigate adding a PM to VFD's for loose connections using either thermography or physical inspection.	Gregory A Menz/BASF-CATALYSTS/BASF	04/18/2014	08/25/2014	N	N
2	Investigate better mechanism for communicating changes (MOC) within the plant and assuring MOC's are entered for changes impacting equipment functionality.	Noemi Trent/BASF-CATALYSTS/BASF	05/31/2014	06/09/2014	N	N

Approved By:

Manager / Dept. Head	**Leon Zavodnik 03/20/2014 02:25 PM**
EHS Unit Coordinator	**Tim Anglin 04/04/2014 08:07 AM**
Employee	**Robert Scoggins 04/04/2014 11:41 PM**